CLAIMS

1. Radiocommunication method, in which an active set of transceivers (1-3; 11-13) in a cellular radio network communicate with a terminal (4), according to frame structures subdivided into successive time slots, the method comprising the following steps :

- send from the terminal a first radio signal at variable power over a dedicated uplink channel;
- send from each transceiver of the active set, over a dedicated downlink channel, a second radio signal carrying, in each time slot, a first power modification command determined on the basis of the first radio signal as received;
- send intermittently a third radio signal to the terminal, over a shared downlink channel from a reference transceiver of the active set; and
- send intermittently from the terminal a fourth radio signal with variable power over an uplink signalling channel associated with said shared downlink channel, to supply feedback data for sending of the third radio signal,

in which the terminal executes the following steps for each time slot of the dedicated downlink channels during a non-transmission period of the fourth radio signal :

- combine the first power modification commands received respectively from the transceivers of the active set in order to obtain a second power modification command for a corresponding time slot of the dedicated uplink channel;
- detect whether the first command received from the reference transceiver differs from the second command obtained; and
- set the transmission power of the first radio signal according to the second power modification command,

and the next step when the transmission of the fourth radio signal begins over the uplink signalling channel after said non-transmission period:

- set the transmission power of the fourth radio signal, taking into account the differences detected during at least part of said period.

2. Method according to claim 1, in which the first radio signal carries pilot symbols to aid reception of the signals sent by the terminal (4) over uplink channels, and in which the differences detected are taken into account in setting the transmission power of the fourth radio signal in the first time slot following said non-transmission period and in setting the transmission power of the first radio signal in a corresponding time slot of said dedicated uplink channel.

3. Method according to claim 2, in which, when the terminal (4) continues to send the fourth radio signal after the first time slot following said non-transmission period, the transmission power of the first and fourth radio signals after said first time slot is set by applying the first power modification command received from the reference transceiver (1; 11).

4. Method according to claims 2 or 3, in which, during the non-transmission period of the fourth radio signal, the terminal (4) stores the number of differences detected for the K most recent time slots of the dedicated downlink channels, K being a positive integer, and in which setting the transmission power of the fourth radio signal in the first time slot following said non-transmission period includes application of a correction proportional to the number of differences stored.

5. Method according to claim 4, in which $K \geq 1$ and said correction is applied to a value resulting from the first power modification command received from the reference transceiver.

6. Method according to any one of the preceding claims, in which a group of at least two transceivers (11-13) in the active set, including the reference transceiver (11), belong to a single radio unit (10) in which a first common power modification command is determined at each time slot to be sent by each of the transceivers in the group, based on the versions of the first radio signal received by the transceivers in the group, and in which the radio unit activates reception of the fourth radio signal in each of the transceivers in the group and combines the versions of the fourth radio signal received respectively by the transceivers in the group to recover the feedback data.

7. Radiocommunication terminal for communicating with a cellular radio network using frame structures subdivided into successive time slots for transmitting radio signals, comprising:

- means of sending a first variable power radio signal over a dedicated uplink channel addressed to an active set of transceivers in the cellular radio network;
- means of receiving second radio signals sent respectively over dedicated downlink channels by the transceivers in the active set, the second radio signal originating from a transceiver carrying, in each time slot, an initial power modification command determined on the basis of the first radio signal received;
- means of receiving a third radio signal sent intermittently by a reference transceiver in the active set over a shared downlink channel;
- means for the intermittent transmission of a fourth variable power radio signal over an uplink signalling channel associated with said shared downlink channel, to supply feedback data for sending of the third radio signal;
- means of combining the initial power modification commands received respectively from the transceivers in the active set for each time slot of the dedicated downlink channels during a non-transmission period of the fourth radio signal, in order to obtain a second power modification command for a corresponding time slot in the dedicated uplink channel ;
- means of detecting the differences between the first command received from the reference transceiver and the second command obtained during the non-transmission period of the fourth radio signal;
- first means of setting the transmission power of the first radio signal during the non-transmission period of the fourth radio signal, according to the second power modification command: and
- second means of setting the transmission power of the fourth radio signal when sending of the fourth radio signal starts over the uplink signalling channel after said non-transmission period, the second setting means being arranged for taking into account the differences detected by the detection means during at least part of said period.

8. Terminal according to claim 7, in which the first radio signal carries pilot symbols to aid reception of signals sent over the uplink channels, and in which the second setting means are arranged for taking into account differences detected in the setting of the transmission power of the fourth radio signal in the first time slot following said non-transmission period and in the setting of the transmission power of the first radio signal in a corresponding time slot of said dedicated uplink channel.

9. Terminal according to claim 8, comprising third means of setting the transmission power of the first and fourth radio signals when the terminal continues to send the fourth radio signal after the first time slot following said non-transmission period, the third setting means being arranged for setting the transmission power of the first and fourth radio signals after said first time slot by applying the first power modification command received from the reference transceiver.

10. Terminal according to claim 8 or 9, comprising means of storing the number of differences detected by the detection means for the K most recent time slots of the dedicated downlink channels, K being a positive integer, and in which the second setting means are arranged for applying a correction proportional to the number of differences stored in the setting of the transmission power of the fourth radio signal in the first time slot following said non-transmission period.

11. Terminal according to claim 10, in which $K \geq 1$ and said correction is applied to a value resulting from the first power modification command received from the reference transceiver.

12. Radio unit for a cellular radio network using structures of frame subdivided in successive time slots for transmitting radio signals, comprising several transceivers (11-13) which can be directed to join an active set of transceivers relative to a terminal (4),

in which each transceiver of the unit belonging to the active set is arranged for receiving a first radio signal sent by the terminal over a dedicated uplink channel and to send, over a dedicated downlink channel, a second radio signal carrying a command to modify the power in each time slot, the power modification command being determined jointly for the transceivers in the unit belonging to the active set by combining the

versions of the first radio signal received respectively by said transceivers,

in which any one of the transceivers belonging to the active set can also be directed to send in isolation and intermittently a third radio signal to the terminal, over a shared downlink channel and to receive a fourth radio signal sent intermittently by the terminal over an uplink signalling channel associated with said shared downlink channel, the fourth radio signal supplying feedback data for sending of the third radio signal,

the radio unit also including means to activate reception of the fourth radio signal in each of the transceivers of the unit belonging to the active set and means of combining the versions of the fourth radio signal received respectively by the transceivers of the unit belonging to the active set, to recover feedback data.